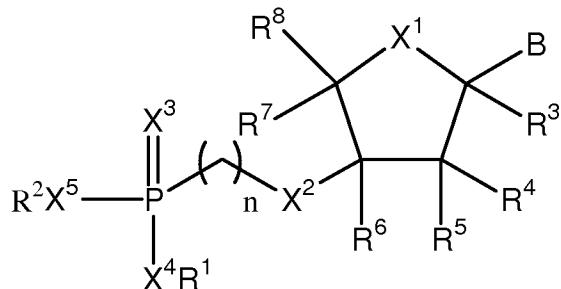


## AMENDMENTS TO THE CLAIMS

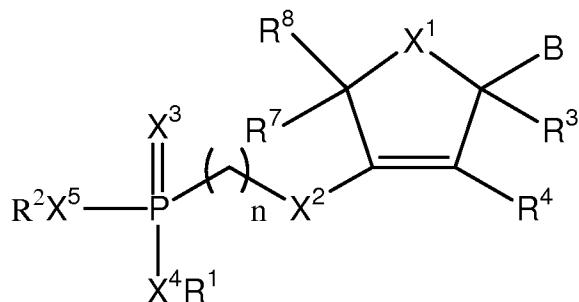
This listing of the claims will replace, without prejudice, all prior listing of claims in the application.

**1-13. (Cancelled)**

14. (Currently amended) A compound represented by one of the general formulae (II) and (XIX):



(II), and



(XIX)

wherein:

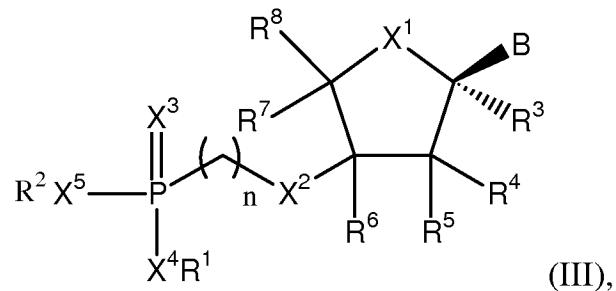
- $X^1, X^2, X^3, X^4$  and  $X^5$  are each a divalent moiety independently selected from the group consisting of -O- and -S-,
  - B is a heterocycle heterocyclic moiety selected from the group consisting of pyrimidine and purine bases base moieties,

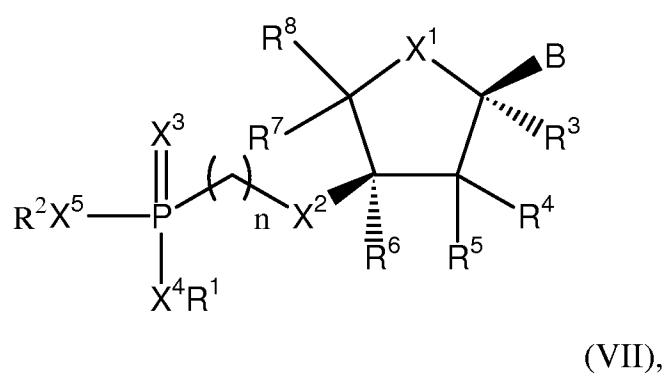
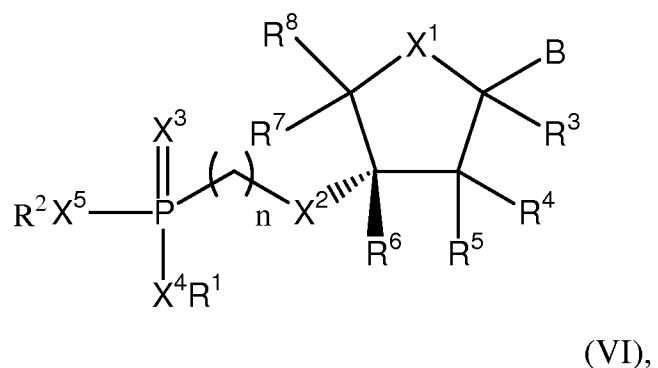
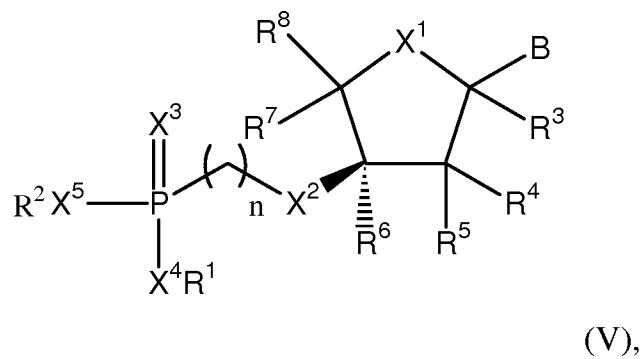
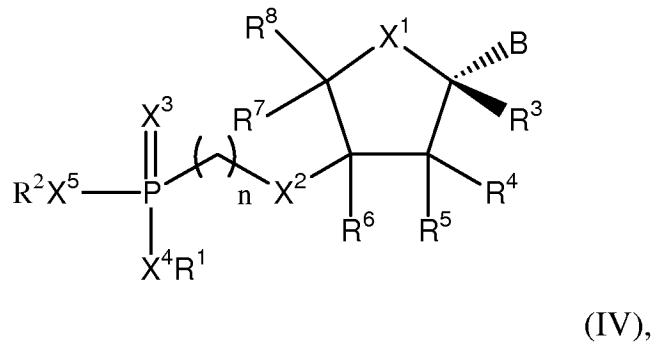
- $R^1$  and  $R^2$  are each independently selected from the group consisting of hydrogen;  $(-PO_3R^{16})_m-PO_3R^{17}R^{18}$ ; alkyl; alkenyl; alkynyl; cycloalkyl; cycloalkenyl; cycloalkynyl; aryl; arylalkyl; acyloxyalkyl; acyloxyalkenyl; acyloxyalkynyl; acyloxyaryl; acyloxyarylalkyl; acyloxyarylalkenyl; acyloxyarylalkynyl; dialkylcarbonato; alkylarylcarbonato; alkylalkenylcarbonato; alkylalkynylcarbonato; alkenylarylcarbonato; alkynylarylcarbonato; and alkenyl-alkynylcarbonato; ~~dialkenylcarbonato dialkynylcarbonato~~; wherein said alkyl, alkenyl and alkynyl optionally contains one or more heteroatoms heteroatomic moieties in the hydrocarbon chain, said heteroatoms heteroatomic moieties being independently selected from the group consisting of oxygen and sulfur and NH; and wherein said dialkylcarbonato group has the structure alkyl-OC(O)O-alkylenyl wherein the alkylene moiety is further coupled to  $X^4$  or  $X^5$ ;
- $R^4$ ,  $R^5$  and  $R^6$  are each independently selected from the group consisting of hydrogen, azido, halogen, cyano, alkyl, alkenyl, alkynyl,  $SR^{14}$  and  $OR^{14}$ ;
- $R^3$ ,  $R^7$  and  $R^8$  are each hydrogen;
- $R^{14}$  is selected from the group consisting of hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; cycloalkenyl; cycloalkynyl; aryl; arylalkyl; and acyloxyalkyl; wherein said alkyl, alkenyl and alkynyl optionally contain one or more heteroatoms heteroatomic moieties in the hydrocarbon chain, said heteroatoms heteroatomic moieties being independently selected from the group consisting of oxygen and sulfur;
- $R^{16}$ ,  $R^{17}$  and  $R^{18}$  are independently selected from the group consisting of hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; cycloalkenyl; cycloalkynyl; aryl; arylalkyl; and acyloxyalkyl; wherein said alkyl, alkenyl and alkynyl optionally contain one or more heteroatoms heteroatomic moieties in the hydrocarbon chain, said heteroatoms heteroatomic moieties being independently selected from the group consisting of oxygen and sulfur;

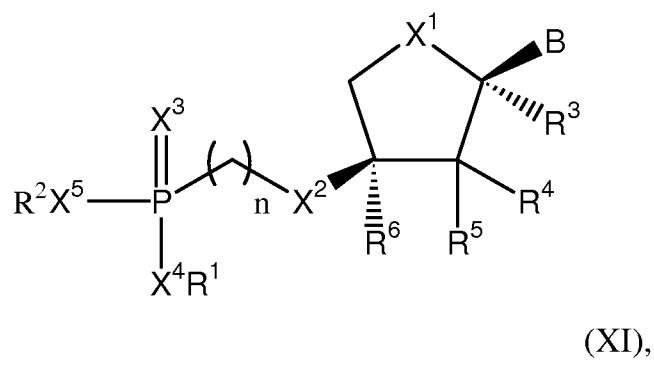
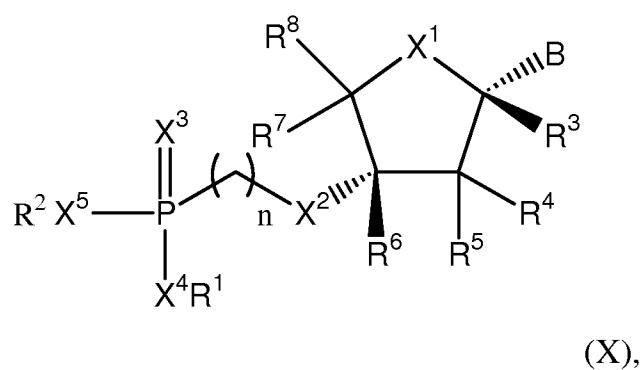
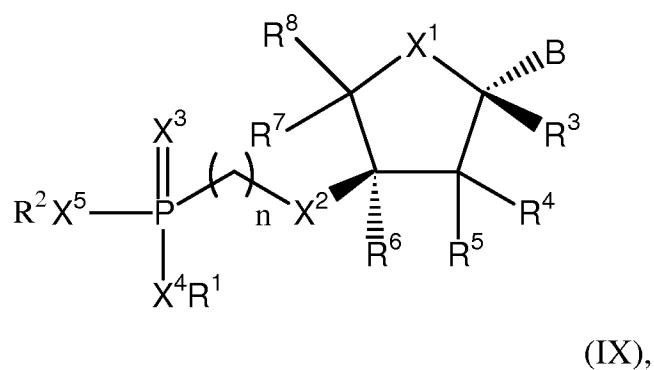
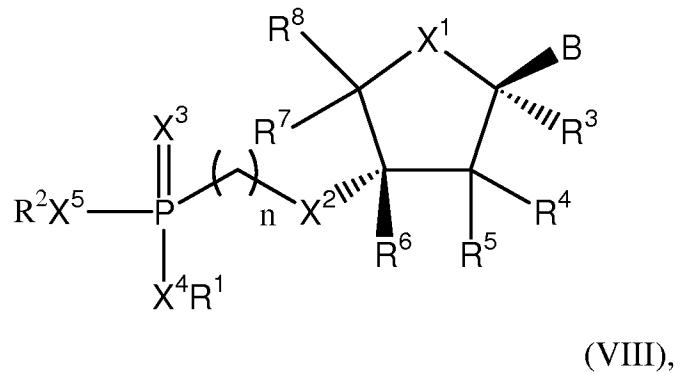
- $R^9$  is selected from the group consisting of hydrogen, alkyl, aryl, alkenyl, alkynyl, alkenylaryl, alkynylaryl and alkylaryl, wherein each of said alkyl, alkenyl, alkynyl and aryl groups is optionally substituted with one or more atoms or groups selected from the group consisting of halo, cyano, azido, nitro and  $OR^{14}$ ;
- $R^{10}$  is selected from the group consisting of hydrogen, alkyl, aryl, alkenyl, alkynyl, alkenylaryl, alkynylaryl and alkylaryl, wherein each of said alkyl, alkenyl, alkynyl and aryl groups is optionally substituted with one or more atoms or groups selected from the group consisting of halo, cyano, azido, nitro,  $OR^{14}$  and  $NR^{11}R^{12}$ ;
- $R^{11}$  and  $R^{12}$  are each independently selected from the group consisting of hydrogen and alkyl, provided that at least one of  $R^{11}$  and  $R^{12}$  is not hydrogen;
- $n$  is an integer representing the number of methylene groups between  $X_2$  and P, each of said methylene groups being optionally and independently substituted with one or two substituents selected from the group consisting of halogen, hydroxyl, sulhydryl and  $C_{1-4}$  alkyl, and  $n$  being selected from 1, 2, 3, 4, 5 and 6; and
- $m$  is 0 or 1,

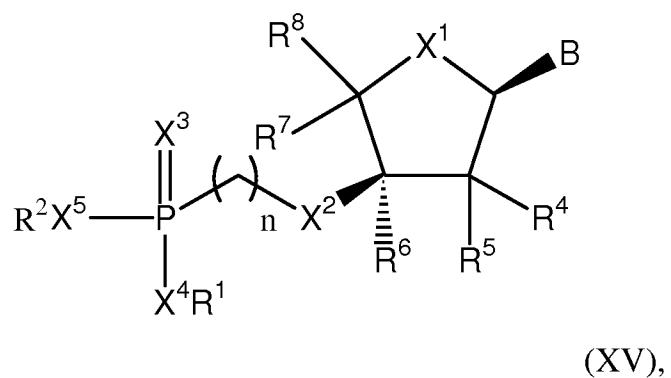
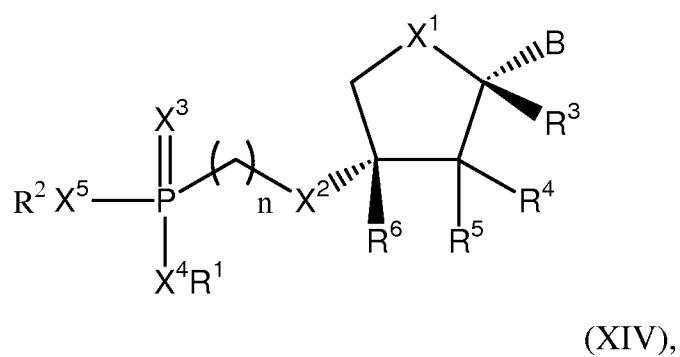
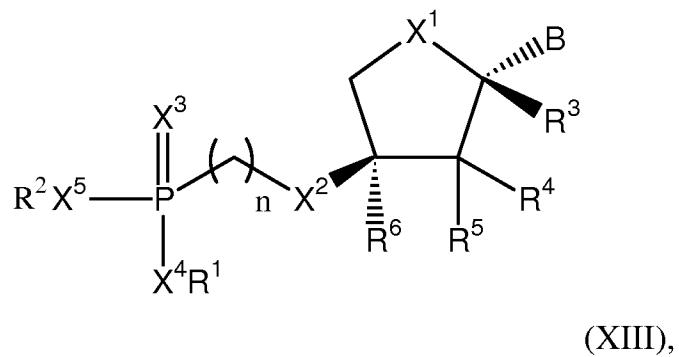
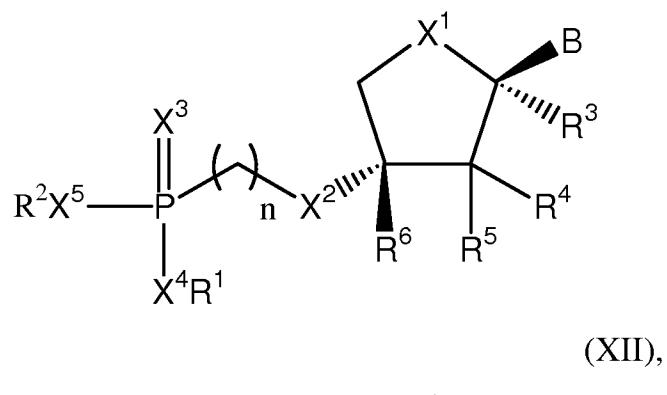
or a pharmaceutically acceptable salt or a stereoisomer thereof.

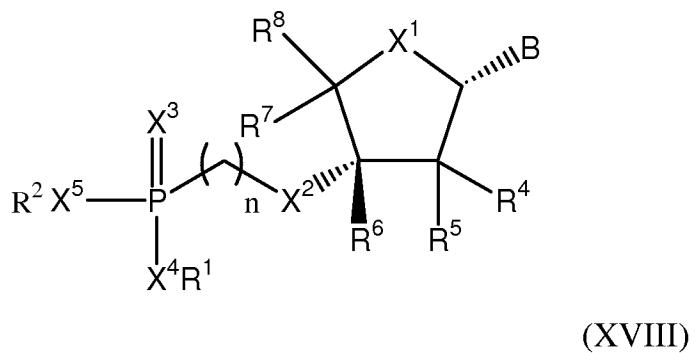
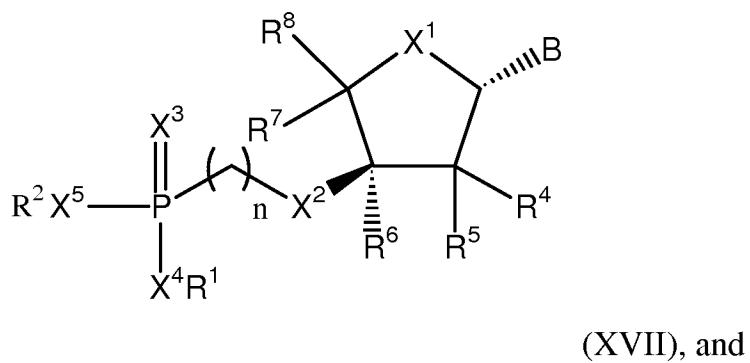
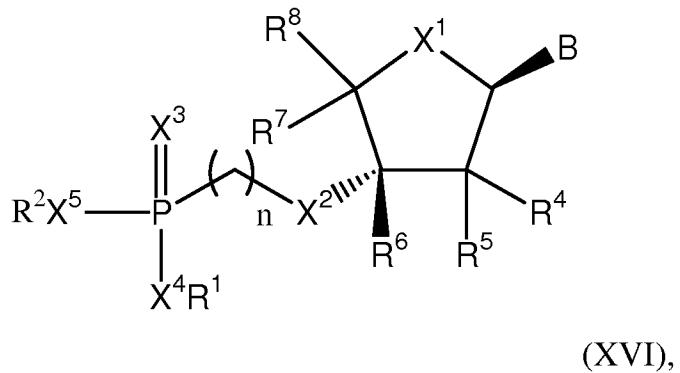
15. (Currently amended) The compound of claim 14, being represented by one of the general formulae (III) to (XVIII):





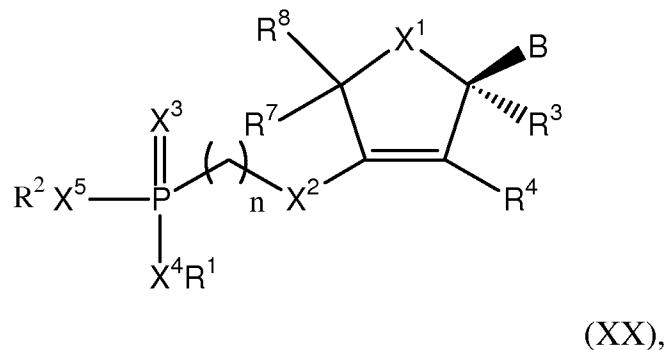




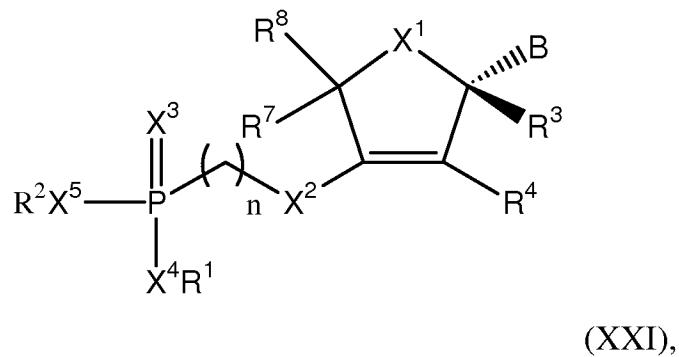


wherein n, m, B, X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup>, X<sup>4</sup>, X<sup>5</sup>, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>14</sup>, R<sup>16</sup>, R<sup>17</sup> and R<sup>18</sup> are defined as in formula (II), or a pharmaceutically acceptable salt or a stereoisomer thereof.

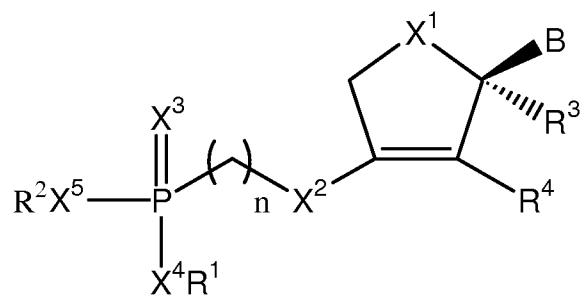
16. (Currently amended) The compound of claim 14, being represented by any of the following formulae (XX) to (XXVI):



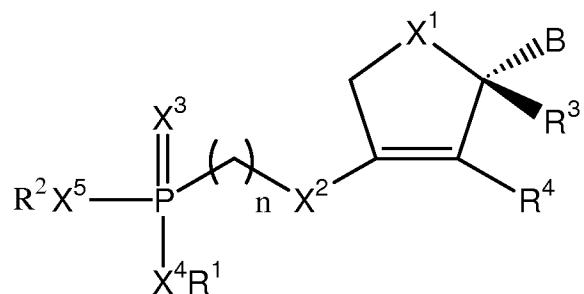
(XX),



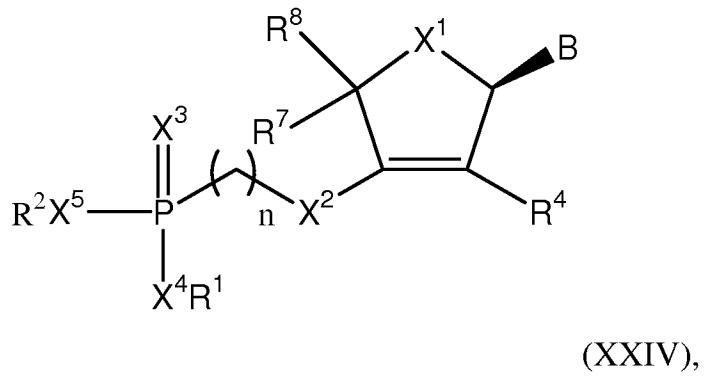
(XXI),



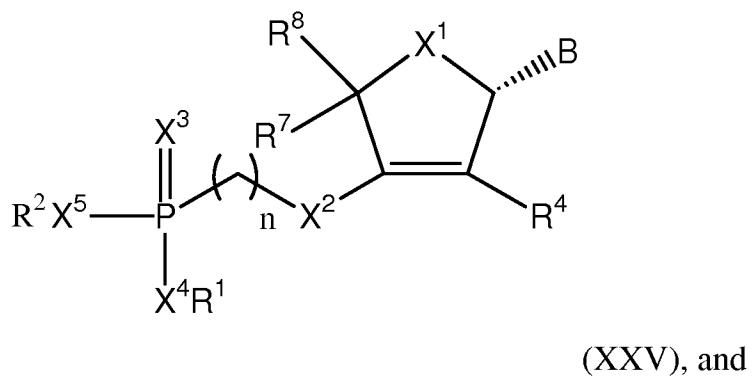
(XXII),



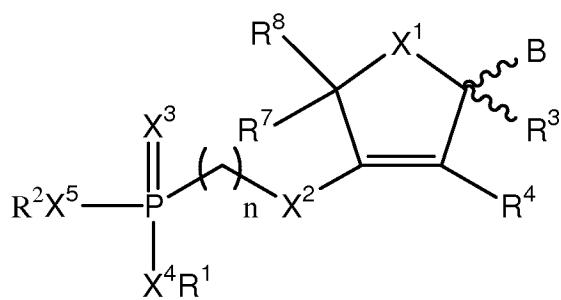
(XXIII),



(XXIV),



(XXV), and



(XXVI),

wherein n, m, B, X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup>, X<sup>4</sup>, X<sup>5</sup>, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>14</sup>, R<sup>16</sup>, R<sup>17</sup> and R<sup>18</sup> are defined as in formula (XIX), or a pharmaceutically acceptable salt or a stereoisomer thereof.

17. (Currently amended) The compound of claim 14, wherein B is selected from the group consisting of hypoxanthinyl, guaninyl, adeninyl, cytosinyl, thyminyl, uracilyl, xanthinyl and 2,6-diaminopurinyl; 8-aza analogues of 2-aminopurinyl, 2,6-

diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 7-deaza-8-aza analogues of adeninyl, guaninyl, 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 1-deaza analogues of 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 7-deaza analogues of 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 6-azacytosinyl; 5-fluorocytosinyl; 5-chlorocytosinyl; 5-iodocytosinyl; 5-bromocytosinyl; 5-methylcytosinyl; 5-bromovinyluracilyl; 5-fluorouracilyl; 5-chlorouracilyl; 5-iodouracilyl; 5-bromouracilyl; 5-trifluoromethyluracilyl; 5-methoxymethyluracilyl; 5-ethynyluracilyl and 5-propynyluracilyl.

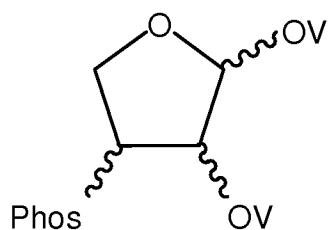
18. (Currently amended) The compound of claim 15, wherein B is selected from the group consisting of hypoxanthinyl, guanineyl guaninyl, adenineyl adeninyl, cytosineyl cytosinyl, thyminyl, uracilyl, xanthinyl and 2,6-diaminopurinyl; 8-aza analogues of 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one

or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 7-deaza-8-aza analogues of adeninyl, guaninyl, 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 1-deaza analogues of 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 7-deaza analogues of 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 3-deaza analogues of 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 6-azacytosinyl; 5-fluorocytosinyl; 5-chlorocytosinyl; 5-iodocytosinyl; 5-bromocytosinyl; 5-methylcytosinyl; 5-bromovinyluracilyl; 5-fluorouracilyl; 5-chlorouracilyl; 5-iodouracilyl; 5-bromouracilyl; 5-trifluoromethyluracilyl; 5-methoxymethyluracilyl; 5-ethynyluracilyl and 5-propynyluracilyl.

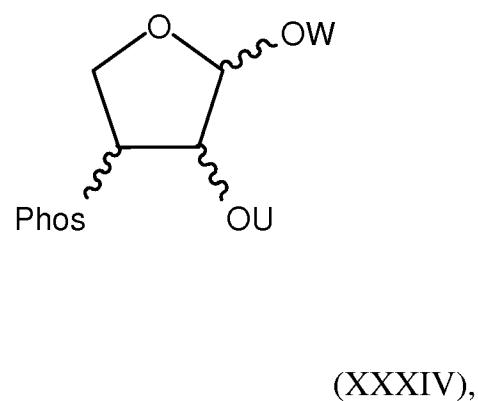
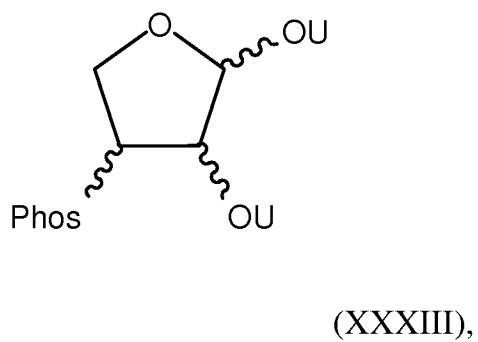
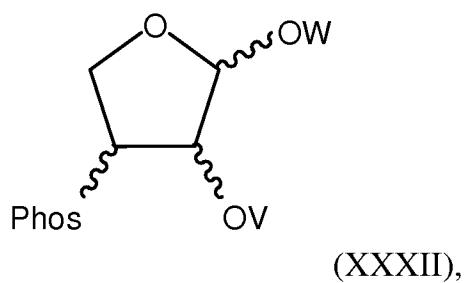
19. (Currently amended) The compound of claim 16, wherein B is selected from the group consisting of hypoxanthinyl, guanineyl guaninyl, adenineyl adeninyl, cytosineyl cytosinyl, thyminyl, uracilyl, xanthinyl and 2,6-diaminopurinyl; 8-aza analogues of 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 7-deaza-8-aza analogues of adeninyl, guaninyl, 2-

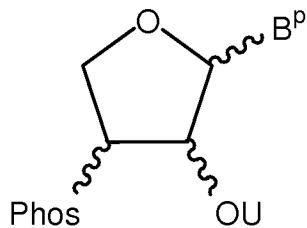
aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 1-deaza analogues of 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 7-deaza analogues of 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 3-deaza analogues of 2-aminopurinyl, 2,6-diaminopurinyl, 2-amino-6-chloropurinyl, hypoxanthinyl and xanthinyl wherein the heterocyclic ring moiety is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxyl, amino and C<sub>1-6</sub> alkyl; 6-azacytosinyl; 5-fluorocytosinyl; 5-chlorocytosinyl; 5-iodocytosinyl; 5-bromocytosinyl; 5-methylcytosinyl; 5-bromovinyluracilyl; 5-fluorouracilyl; 5-chlorouracilyl; 5-iodouracilyl; 5-bromouracilyl; 5-trifluoromethyluracilyl; 5-methoxymethyluracilyl; 5-ethynyluracilyl and 5-propynyluracilyl.

20. (Currently amended) A compound represented by one of the following general formulae (XXXI) to (XXXVI):

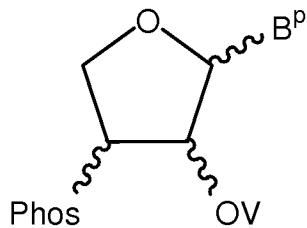


(XXXI),





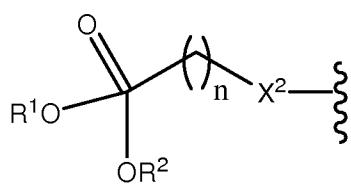
(XXXV), and



(XXXVI),

wherein:

- U is an acyl group,
- V is a trimethylsilyl or *tert*-butyldimethylsilyl group,
- W is an alkyl group,
- the snake-like symbol means any stereochemical arrangement of the respective bond,
- $B^p$  is an optionally protected heterocyclic nucleobase moiety, and
- Phos is a phosphonate group having the following structure, -coupled via a  $C_{4-6}$ -alkyl group to an oxygen or sulfur atom, said oxygen or sulfur atom being itself coupled to the tetrahydrofuran skeleton of said compound



wherein

- X<sup>2</sup> is O or S;
- R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of hydrogen; (-PO<sub>3</sub>R<sup>16</sup>)<sub>m</sub>-PO<sub>3</sub>R<sup>17</sup>R<sup>18</sup>; alkyl; alkenyl; alkynyl; cycloalkyl; cycloalkenyl; cycloalkynyl; aryl; arylalkyl; acyloxyalkyl; acyloxyalkenyl; acyloxyalkynyl; acyloxyaryl; acyloxyarylalkyl; acyloxyarylalkenyl; acyloxyarylalkynyl; dialkylcarbonato; alkylarylcyanato; alkylalkenylcarbonato; alkylalkynylcarbonato; alkenylarylcyanato; alkynylarylcyanato; and alkenylalkynylcarbonato; wherein said alkyl, alkenyl and alkynyl can contain a heteroatomic moiety in the hydrocarbon chain, said heteroatomic moiety being selected from the group consisting of oxygen, sulfur and NH; and wherein said dialkylcarbonato group has the structure alkyl-OC(O)O-alkylenyl wherein the alkylenyl moiety of the dialkylcarbonato group is further coupled to the oxygen of the phosphonate group;
- R<sup>16</sup>, R<sup>17</sup> and R<sup>18</sup> are independently selected from the group consisting of hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; cycloalkenyl; cycloalkynyl; aryl; arylalkyl and acyloxyalkyl; wherein said alkyl, alkenyl and alkynyl can contain a heteroatomic moiety in the hydrocarbon chain, said heteroatomic moiety being selected from the group consisting of oxygen, sulfur and NH; and
- n is an integer selected from 1, 2, 3, 4, 5 or 6.

21.(Currently amended) The compound of claim 14, being selected from the group consisting of:

1-(N<sup>6</sup>-benzoyladenin-9-yl)-2-O-benzoyl-3-O-(diisopropylphosphonomethyl)-L-threo furanose (**11**);

1-(thymin-1-yl)-2-O-benzoyl-3-O-(diisopropylphosphonomethyl)-L-threofuranose (**12**);

1-(uracil-1-yl)-2-O-benzoyl-3-O-(diisopropylphosphonomethyl)-L-threofuranose (**13**);

1-(N<sup>4</sup>-acetylcytosin-1-yl)-2-O-benzoyl-3-O-(diisopropylphosphonomethyl)-L-threofuranose (**14**);

1-(adenin-9-yl)-3-O-(diisopropylphosphonomethyl)-L-threofuranose (**15**);  
1-(thymin-1-yl)-3-O-( diisopropylphosphonomethyl)-L-threofuranose (**16**);  
1-(uracil-1-yl)-3-O-( diisopropylphosphonomethyl)-L-threofuranose (**17**);  
1-(cytosin-1-yl)-3-O-(diisopropylphosphonomethyl )-L-threofuranose (**18**);  
1-(adenin-9-yl)-2-deoxy-3-O-(diisopropylphosphonomethyl)-L-threofuranose (**19**);  
1-(thymin-1-yl)-2-deoxy-3-O-(diisopropylphosphonomethyl)-L-threofuranose (**20**);  
1-(uracil-1-yl)-2-deoxy-3-O-(diisopropylphosphonomethyl)-L-threofuranose (**21**);  
1-(cytosin-1-yl)-2-deoxy-3-O-(diisopropylphosphonomethyl)-L-threofuranose (**22**);  
1-(adenin-9-yl)-3-O-(phosphonomethyl)-L-threofuranose disodium salt (**3a**);  
1-(thymin-1-yl)-3-O-(phosphonomethyl)-L-threofuranose disodium salt (**3b**);  
1-(uracil-1-yl)-3-O-(phosphonomethyl)-L-threofuranose disodium salt (**3c**);  
1-(cytosin-1-yl)-3-O-(phosphonomethyl)-L-threofuranose disodium salt (**3d**);  
1-(adenin-1-yl)-2-deoxy-3-O-(phosphonomethyl)-L-threofuranose disodium salt (**3e**);  
1-(thymin-1-yl)-2-deoxy-3-O-(phosphonomethyl)-L-threofuranose disodium salt (**3f**);  
1-(uracil-1-yl)-2-deoxy-3-O-(phosphonomethyl)-L-threofuranose disodium salt (**3g**); and  
1-(cytidin-1-yl)-2-deoxy-3-O-(phosphonomethyl)-L-threofuranose disodium salt (**3h**);  
or a pharmaceutically acceptable salt, or a stereoisomer thereof.

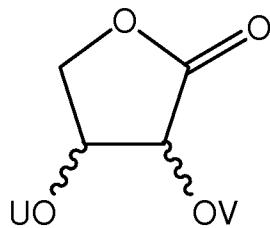
22. (Currently amended) A method of treatment of retroviral viral-infections in a mammal in need thereof comprising the administration of a compound according to claim 14.

23. (Previously presented) A method of treatment of an infection by the Human Immunodeficiency Virus (HIV) in a host in need thereof comprising the administration of a compound according to claim 14.

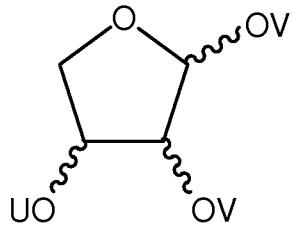
24. (Currently amended) A pharmaceutical composition comprising a compound according to claim 14 as an active ingredient in admixture with at least [[a]] one pharmaceutically acceptable carrier.

25. (Canceled)

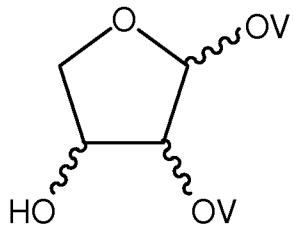
26. (Previously presented) A compound represented by one of the following general formulae (XXVIII) to (XXX):



(XXVIII),



(XXIX), and



(XXX),

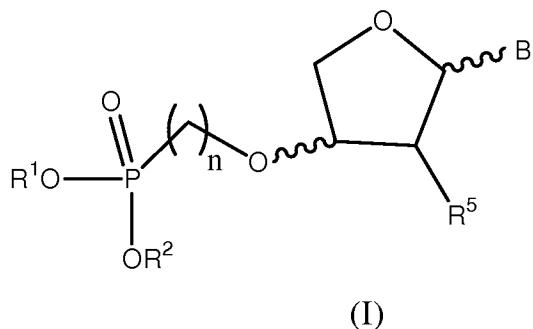
wherein:

- U is an acyl group, provided that U is not an  $\alpha$ -ketoacyl group,

- V is a trimethylsilyl or *tert*-butyldimethylsilyl group, and
- the snake-like symbol means any stereochemical arrangement of the respective bond.

27. (Previously presented) A compound being 2-O-tributyldimethylsilyl-3-O-benzoyl-L-threonolactone.

28. (Currently amended) A furanose nucleoside represented by the general formula (I):



wherein:

- B is a heteroeycle heterocyclic moiety selected from the group consisting of pyrimidine and purine bases base moieties;
- the snake-like symbol means any stereochemical arrangement of the bond linking B, or the phosphonalkoxy group, to the furanyl group[[.]];
- R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of hydrogen; (-PO<sub>3</sub>R<sup>16</sup>)<sub>m</sub>-PO<sub>3</sub>R<sup>17</sup>R<sup>18</sup>; alkyl; alkenyl; alkynyl; cycloalkyl; cycloalkenyl; cycloalkynyl; aryl; arylalkyl; acyloxyalkyl; acyloxyalkenyl; acyloxyalkynyl; acyloxyaryl; acyloxyarylalkyl; acyloxyarylalkenyl; acyloxyarylalkynyl; dialkylcarbonato; alkylarylcarbonato; alkylalkenylcarbonato; alkylalkynylcarbonato; alkenylarylcarbonato; alkynylarylcarbonato; and alkenylalkynylcarbonato; dialkenylcarbonato; dialkynylcarbonato; wherein said alkyl, alkenyl and alkynyl can contain a heteroatom heteroatomic moiety in the hydrocarbon chain, said heteroatom

heteroatomic moiety being selected from the group consisting of oxygen, sulfur and NH; and wherein said dialkylcarbonato group has the structure alkyl-OC(O)O-  
alkylenyl wherein the alkylenyl moiety of the dialkylcarbonato group is further  
coupled to the oxygen of the phosphate moiety;

- R<sup>5</sup> is selected from the group consisting of hydrogen, azido, halogen, cyano, alkyl, alkenyl, alkynyl, SR<sup>14</sup> and OR<sup>14</sup>;
  - R<sup>14</sup> is selected from the group consisting of hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; cycloalkenyl; cycloalkynyl; aryl; arylalkyl and acyloxyalkyl; wherein said alkyl, alkenyl and alkynyl can contain a heteroatom heteroatomic moiety in the hydrocarbon chain, said heteroatom heteroatomic moiety being selected from the group consisting of oxygen, sulfur and NH;
  - R<sup>16</sup>, R<sup>17</sup> and R<sup>18</sup> are independently selected from the group consisting of hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; cycloalkenyl; cycloalkynyl; aryl; arylalkyl and acyloxyalkyl; wherein said alkyl, alkenyl and alkynyl can contain a heteroatom heteroatomic moiety in the hydrocarbon chain, said heteroatom heteroatomic moiety being selected from the group consisting of oxygen, sulfur and NH;
  - n is an integer selected from 1, 2, 3, 4, 5 or 6; and
  - m is 0 or 1,
- or a pharmaceutically acceptable salt or a stereoisomer thereof.

29. (Previously presented) The furanose nucleosides of claim 28, wherein B is 9-adeninyl or 1-thyminyl.